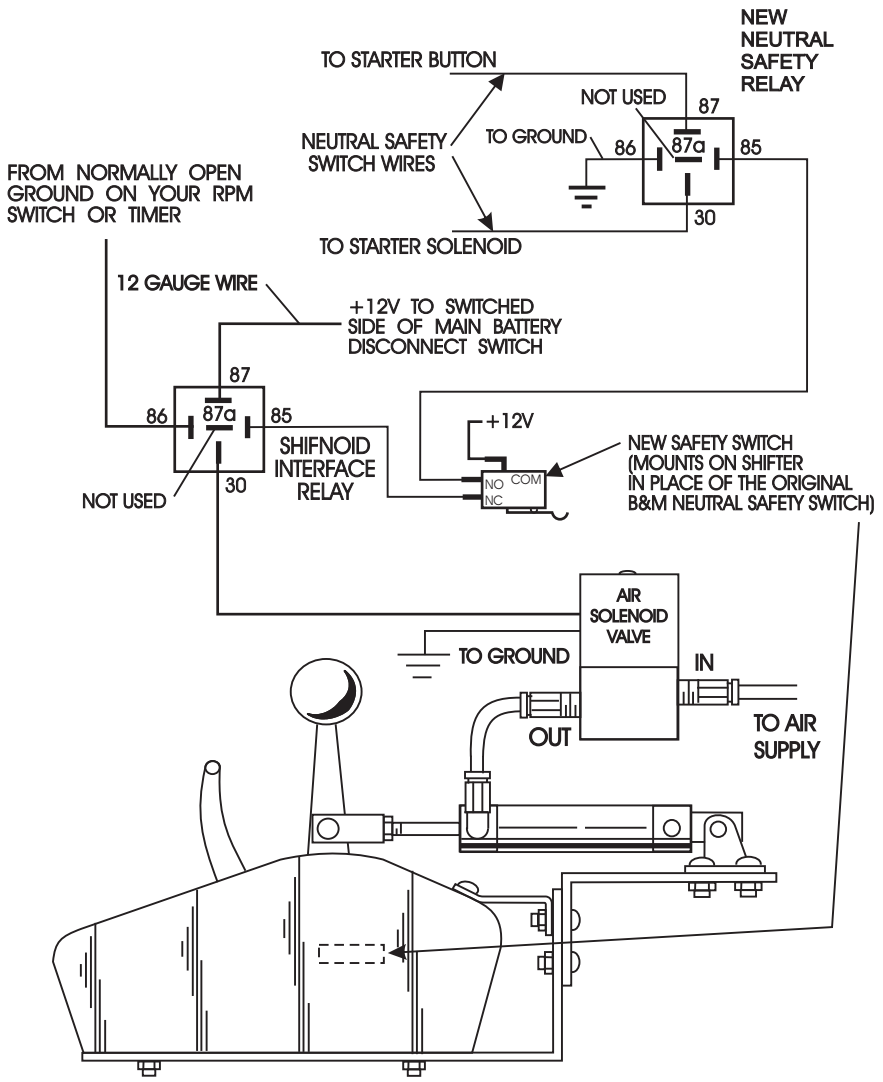
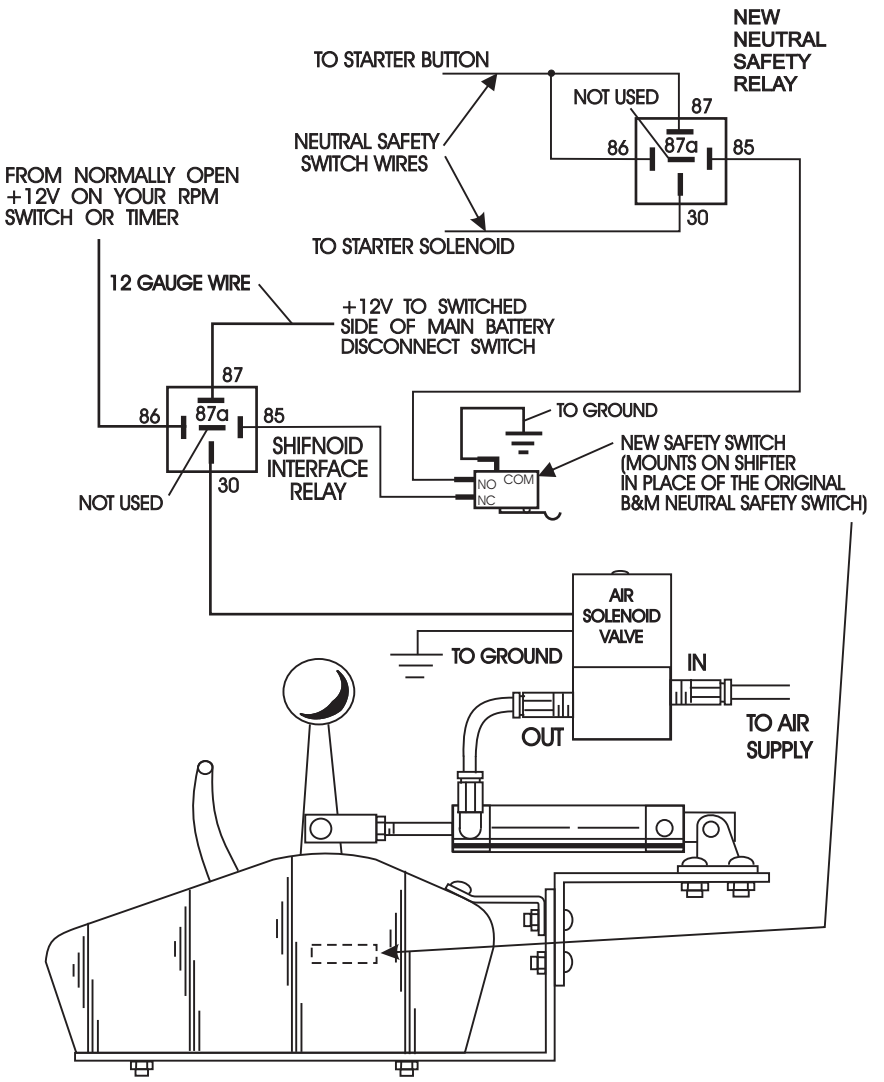
SHIFNOID WIRING DIAGRAM

FOR a B&M PRO RATCHET with SA4070 SOLENOID KIT

IF YOUR RPM SWITCH OR TIMER SUPPLIES "NORMALLY OPEN GROUND" (SHIFNOID OR MSD) USE THIS DIAGRAM



IF YOUR RPM SWITCH OR TIMER SUPPLIES "NORMALLY OPEN +12V" (DEDENBEAR OR DIGITAL DELAY) USE THIS DIAGRAM



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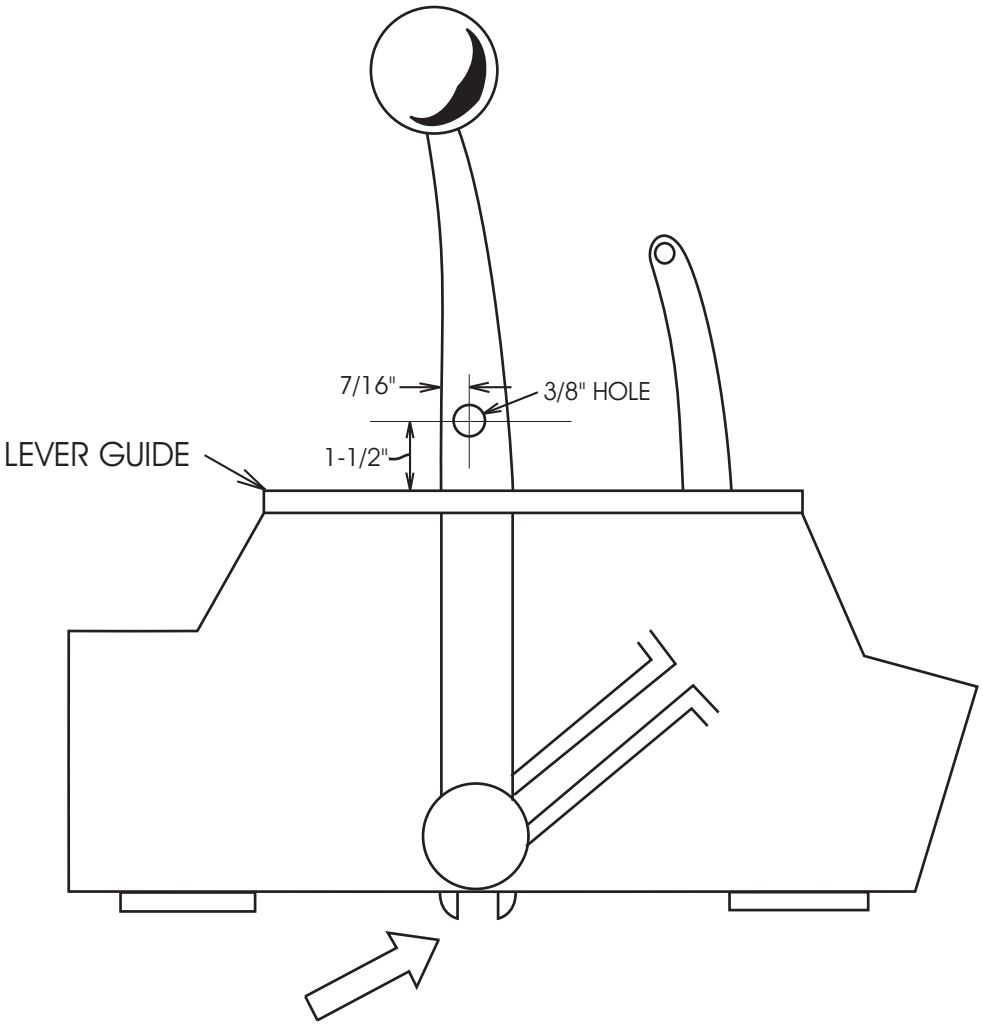
MODIFYING YOUR "B&M" 80842 PRO RATCHET SHIFTER TO INSTALL SHIFNOID SA 4070 OR SA 4075 SHIFT KIT

Drill a 3/8" to 7/16" hole, 7/16" from the back edge of the shifter lever, 1 ½" above the lever guide as shown. This hole is oversize to allow for an arc accommodation. The correct placement of this hole is critical to the operation of the cylinder. Please be precise. Dimensions shown are with cover removed. It is recommended you center punch the correct spot and start with a small drill bit and work up to the final size.

The handle of the shifter extends below the base of the shifter housing. It is common to have the chrome handle rub against the SHIFNOID base plate. This is only noticeable when you shift the shifter lever toward the front or rear. Before installing the shifter, please check for this condition. If it exists, sand or grind a small amount off of the shifter lever so that it clears the SHIFNOID base plate when the shifter is in ALL positions. Depending on when you bought your shifter, this step may not be necessary.



INSTALLATION INSTRUCTIONS
"SHIFNOID" AUTO SHIFTER PART # SA4070

FOR REVERSE PATTERN 3 or 4 SPEED TRANSMISSIONS USING A
"B&M" PRO RATCHET SHIFTER Part # 80842

MODIFYING YOUR "B&M" SHIFTER

When installing this unit on your "B&M Pro Ratchet", the shifter has to be modified according to the Modifying Diagram provided. This consists of drilling a 3/8" to 7/16" hole in the shifter lever 1 1/2" above the lever guide and 7/16" from the back edge of the lever and, if needed, grinding the base of the shifter handle. (See diagram)

MOUNTING THE UNIT

The SHIFNOID mounting bracket is drilled for the "B&M Pro Ratchet" 3 or 4 speed shifter only. The holes in the bottom of the bracket align with the holes in the shifter. Mount the bracket between the shifter and floor or mounting surface, with the bolts supplied with your shifter. Stop at this point to wire the switch that goes under the aluminum cover. Remove the original B&M neutral safety switch and replace it with the SHIFNOID safety switch supplied.

Wire per the attached diagram. (SEE WIRING INSTRUCTIONS). After wiring, install the shifter cover supplied with your shifter. Attach the cylinder clevis to the hole in the shifter handle with the Clevis pin and cotter pin supplied. Mount the Air Solenoid Valve with the included bolts and lock nuts in a location convenient for plumbing.

WIRING THE UNIT

Follow the wiring diagram supplied. If your RPM switch or Timer supplies "Normally Open Ground" connect the trigger wire from your device to post 86 on the SHIFNOID interface relay. Supply post 87 with 12V+ through a 12 gauge wire. Connect post 85 to the N.C. terminal on the new safety switch. Connect post 30 to either wire on the solenoid. The other solenoid wire goes to Ground.

If your RPM switch or Timer supplies a "Normally Open Power" (12 volt +), connect the trigger wire from your device to post 86 on the SHIFNOID interface relay. Supply post 87 with 12V+, through a 12 gauge wire. Connect post 85 to the N.C. terminal on the new safety switch. Connect post 30 to either wire on the solenoid. The other solenoid wire goes to Ground.

There is a new safety switch supplied with this unit. Install this switch in place of the original B&M Neutral safety switch. This switch MUST be used so the shifter cannot be electrically activated while in Park or Neutral. This switch must be correctly adjusted before you install the aluminum cover. This switch must make and brake contact as the shifter moves between Park or Neutral and any Forward or Reverse gear. Do NOT over tighten this switch. If you already had the B&M shifter installed in your car, you had two wires going to the original neutral safety switch. Remove these wires from that switch and move them to the new "Neutral safety relay", post 87 and 30, as shown. If you are installing the shifter and shift kit for the first time, you will create a neutral safety circuit by interrupting the wire that runs between your starter button and your starter solenoid. The new Neutral safety relay is placed in that line, one wire going to post 87, the other to post 30, as shown.

DO NOT CONNECT THIS UNIT DIRECTLY TO A RPM SWITCH. ALWAYS USE THE NEW SAFETY SWITCH AND THE INTERFACE RELAY. AN UNINTENTIONAL SHIFT COULD RESULT IF THE ENGINE SHIFT RPM IS REACHED, SUDDENLY PUTTING THE VEHICLE IN GEAR AND IN MOTION, POSSIBLY RESULTING IN INJURY OR DEATH.

PLUMBING

Follow the supplied diagram for the air lines. Check all fittings for leaks before finalizing your installation. Connect the air line from you regulator to the “IN” or #1 port on the air solenoid valve. Your incoming air / CO2 pressure should be set between 60 and 100 lbs. The lowest working pressure will save the most air/CO2. Increase pressure as needed to compensate for any hard shifting situations, but do not exceed 125 lbs. Connect the “OUT” or #2 port on the air solenoid valve to the front port on the cylinder.

WARNING

Be Prepared! If you are using an RPM switch or Timer, you must be aware that at any time RFI (Radio Frequency Interference) caused by your car, could stop your RPM switch or Timer from activating. This in turn could cause your automatic shifter to not activate and you will need to shift manually. Always pay attention to your car and be prepared to manually shift or lift off of the accelerator to prevent the over revving of your engine. One of the best ways to protect your engine under these conditions is to also install some type of over rev control so that the engine cannot reach an RPM beyond it’s safe limits. Please read the enclosed information on RFI included with this kit.

QUESTIONS ?

If you have questions or concerns on the installation or use of this product, do NOT contact the retailer where you purchased the kit. Most retailers are not equipped to help you with in depth tech questions.

SHIFNOID LTD. has arranged for all tech and warranty to be handled by it’s distributor:

CONTENDER PERFORMANCE PRODUCTS INC.

740-927-0060 www.contenderperformance.com

SUPPLEMENT FOR SHIFNOID SN5070, SN5072, SA4070 & SA4075 3 SPEED ELECTRIC AND CO2 SHIFTER ACTIVATORS

It has come to our attention that some older B&M Pro Ratchet models have different dimensions in the 4 base mounting holes on the shifter, than the current models. In this case, two of the holes in the Shifnoid base bracket needing to be redrilled.

Since proper alignment is critical, if the 4 holes in the bracket do not appear to line up, stop installation and call Shifnoid's distributor and Tech department at:

740-281-0136

7 AM – 7 PM Eastern time.